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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/600,984	02/15/2001	William John Coates	P31957	4229

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EXAMINER

COPPINS, JANET L

ART UNIT PAPER NUMBER

1626

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/600,984	COATES ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Janet L. Coppins	1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 17-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 17-34 are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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### DETAILED ACTION

Claims 17-34 pending in the instant application.

#### *Response to Preliminary Amendment*

1. Receipt is acknowledged of Applicants' Preliminary Amendment, submitted July 28, 2004, which has been reviewed by the Examiner and entered of record in the file. Accordingly, original claims 1-16 have been cancelled, and new claims 17-34 have been added, which are directed to the subject matter of the original claims. Applicants' cancellations render the pending Restriction Requirement moot, however, in view of Applicants' request and the introduction of new claims 17-34, the Examiner places the following Restriction Requirement on the instant claims.

#### *Election/Restrictions*

2. This application contains the following inventions or groups of inventions, which are not so linked as to form a single inventive concept under PCT Rule 13.1.

Due to numerous variables in the claims, e.g. R1, R2, R3, R4, etc. and their widely divergent meanings, a precise listing of inventive groups cannot be made. The following groups are exemplary:

- I. Claims 17 and 20-27, (in part), drawn to methods of using compounds according to formula (I), wherein A and B are both C, classified in various subclasses of class 514. A further election of a single disclosed species will be required if this Group is elected.
- II. Claims 17 and 20-27, (in part), drawn to methods of using compounds according to formula (I), wherein one of A or B is O and the other is C, classified in various

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subclasses of class 514. A further election of a single disclosed species will be required if this Group is elected.

- III. Claims 17 and 20-27, (in part), drawn to methods of using compounds according to formula (I), wherein one of A or B is N and the other is C, classified in various subclasses of class 514. A further election of a single disclosed species will be required if this Group is elected.
- IV. Claims 17 and 20-27, (in part), drawn to methods of using compounds according to formula (I), wherein one of A or B is S and the other is C, classified in various subclasses of class 514. A further election of a single disclosed species will be required if this Group is elected.
- V. Claims 17 and 20-27, (in part), drawn to methods of using compounds according to formula (I), not covered by Groups I-IV, classified in various subclasses of class 514. A further election of a single disclosed species will be required if this Group is elected.
- VI. Claims 18, 19, 28, and 32-34, (in part) drawn to compounds and their compositions according to formula (I), wherein A and B are both C, classified in various subclasses of class 546. A further election of a single disclosed species will be required if this Group is elected.
- VII. Claims 18, 19, 28, and 32-34, (in part) drawn to compounds and their compositions according to formula (I), wherein one of A or B is O and the other is C, classified in various subclasses of class 546. A further election of a single disclosed species will be required if this Group is elected.

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- VIII. Claims 18, 19, 28, and 32-34, (in part) drawn to compounds and their compositions according to formula (I), wherein one of A or B is N and the other is C, classified in various subclasses of class 546. A further election of a single disclosed species will be required if this Group is elected.
- IX. Claims 18, 19, 28, and 32-34, (in part) drawn to compounds and their compositions according to formula (I), wherein one of A or B is S and the other is C, classified in various subclasses of class 546. A further election of a single disclosed species will be required if this Group is elected.
- X. Claims 18, 19, 28, and 32-34, (in part), drawn to compounds and their compositions according to formula (I), not covered by Groups V-IX, classified in various subclasses of class 546. A further election of a single disclosed species will be required if this Group is elected.
- XI. Claim 29 (in part), drawn to a process for preparing a compound according to formula (IA), wherein A and B are both C, classified in various subclasses of class 546. A further election of a single disclosed species will be required if this Group is elected.
- XII. Claim 29 (in part), drawn to a process for preparing a compound according to formula (IA), wherein one of A or B is O and the other is C, classified in various subclasses of class 546. A further election of a single disclosed species will be required if this Group is elected.
- XIII. Claim 29 (in part), drawn to a process for preparing a compound according to formula (IA), wherein one of A or B is N and the other is C, classified in various

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subclasses of class 546. A further election of a single disclosed species will be required if this Group is elected.

- XIV. Claim 29 (in part), drawn to a process for preparing a compound according to formula (IA), wherein one of A or B is S and the other is C, classified in various subclasses of class 546. A further election of a single disclosed species will be required if this Group is elected.
- XV. Claim 29, (in part), drawn to a process for preparing a compound according to formula (IA), not covered by Groups XI-XIV, classified in various subclasses of class 546. A further election of a single disclosed species will be required if this Group is elected.
- XVI. Claim 30 (in part), drawn to a process for preparing a compound according to formula (IB), wherein A and B are both C, classified in various subclasses of class 546. A further election of a single disclosed species will be required if this Group is elected.
- XVII. Claim 31 (in part), drawn to a process for preparing a compound according to formula (I), wherein A and B are both C, classified in various subclasses of class 546. A further election of a single disclosed species will be required if this Group is elected.
- XVIII. Claim 31 (in part), drawn to a process for preparing a compound according to formula (I), wherein one of A or B is O and the other is C, classified in various subclasses of class 546. A further election of a single disclosed species will be required if this Group is elected.

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- XIX. Claim 31 (in part), drawn to a process for preparing a compound according to formula (I), wherein one of A or B is N and the other is C, classified in various subclasses of class 546. A further election of a single disclosed species will be required if this Group is elected.
- XX. Claim 31 (in part), drawn to a process for preparing a compound according to formula (I), wherein one of A or B is S and the other is C, classified in various subclasses of class 546. A further election of a single disclosed species will be required if this Group is elected.
- XXI. Claim 31, (in part), drawn to a process for preparing a compound according to formula (I), not covered by Groups XVI-XX, classified in various subclasses of class 546. A further election of a single disclosed species will be required if this Group is elected.

- 2. In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted. Again, this list is not exhausted, as it would be impossible under the time constraints due to the sheer volume of subject matter instantly claimed. Therefore, Applicant may choose to elect a single invention by identifying another specific embodiment not listed in the exemplary groups of the invention and the Examiner will endeavor to group the same. If Applicant is unable to elect a single invention, Applicant may instead choose to elect a specific compound and examiner will attempt to group it.
- 3. Upon thorough consideration of the claims, the examiner has determined that a lack of unity of invention exists, as defined in Rule 13.

PCT Rule 13.1 states that the international application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept ("requirement of unity of invention").

PCT Rule 13.2 states that unity of invention referred to in Rule 13.1 shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features.

Annex B, **Part I(a)**, indicates that the application should relate to only one invention, or if there is more than one invention, inclusion is permitted if they are so linked to form a single general inventive concept.

Annex B, **Part I(b)**, indicates that "special technical features" means those technical features that as a whole define a contribution over the prior art.

Annex B, **Part I(c)**, further defines independent and dependent claims. Unity of invention only is concerned in relation to independent claims. Dependent claims are defined as a claim that contains all the features of another claim and is in the same category as the other claim. The category of a claim refers to the classification of claims according to subject matter, e.g. product, process, use, apparatus, means, etc.

Annex B, **Part I(e)**, indicates the permissible combinations of different categories of claims. **Part I(e(i))** states that inclusion of an independent claim for a given product, an independent claim for a process specially adapted for the manufacture of the said product, and an independent claim for a use of the said product is permissible.

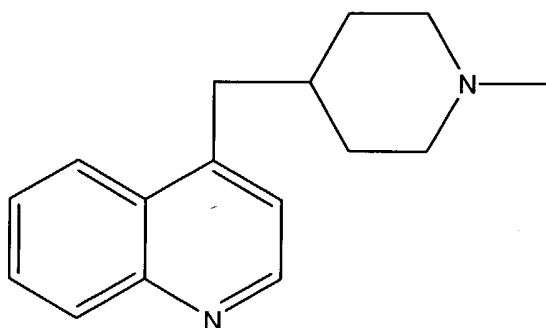
Annex B, **Part I(f)** indicates the "Markush practice" of alternatives in a single claim. **Part I(f(i))** indicates the technical interrelationship and the same or corresponding special technical feature is considered to be met when: (A) all alternatives have a common property or activity,



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and (B) a common structure is present or all alternatives belong to a recognized class of chemical compounds. Further defining (B) in Annex B, **Part I(f)(i-iii)**, the common structure must; a) occupy a large portion of their structure, or b) the common structure constitutes a structurally distinctive portion, or c) where the structures are equivalent and therefore a recognized class of chemical compounds, each member could be substituted for one another with the same intended result. That is, with a common or equivalent structure, there is an expectation from knowledge in the art that all members will behave in the same way. Thus, the technical relationship and the corresponding special technical feature result from a common (or equivalent) structure that is responsible for the common activity (or property). **Part I(f(iv))** indicates that when all alternatives of a Markush grouping can be differently classified, it shall not, taken alone, be considered justification for finding a lack of unity. **Part I(f(v))** indicates that when dealing with alternatives, it can be shown that at least one Markush alternative is not novel over the prior art, the question of unity of invention shall be reconsidered, but does not imply that an objection shall be raised.

4. The claims herein lack unity of invention under PCT Rule 13.1 and 13.2, since the compounds defined in the claims lack a significant structural element qualifying as the special technical feature that defines a contribution over the prior art. The compounds claimed contain



, which does not define a contribution over the prior art. Attached to the instant office action is a copy of a reference that provides that the technical

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feature, which can be taken as a whole amongst all the alternatives, as depicted above, is not a 'special technical feature' as defined in PCT Rule 13.2, by failing to define a contribution over the prior art, as it was known in the art prior to the filing of the instant application. See attached Trijzelaar et al, U.S. Pat. No. 4,442,106.

Furthermore, the substituents vary extensively and when taken as a whole result in vastly different compounds. Accordingly, unity of invention is considered to be lacking and restriction of the invention in accordance with the rules of unity of invention is considered to be proper. Additionally, the vastness of the claimed subject matter and the complications in understanding the claimed subject matter imposes a burden on any examination of the claimed subject matter.

5. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### *Telephone Inquiry*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janet L. Coppins whose telephone number is 571.272.0680. The examiner can normally be reached on M-F 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. McKane can be reached on 571.272.0699. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Janet L. Coppins  
November 26, 2004

*for* Kamal Saeed  
Joseph K. McKane  
SPE, Art Unit 1626